

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-4. (Canceled)

5. (Currently Amended) A system comprising:

a point-of-use process chamber including a drain and configured to apply a plating solution to plate one or more wafers by spray, microcell, or spin on;

a plurality of tanks to separately hold constituent chemicals of the plating solution;

a piping system having a plurality of segments, including a plurality of in-line heaters for a subset of the segments, to separately route, in-line heat, and after heating, mix, at a mixing point, the constituent chemicals of the plating solution to form the plating solution, substantially just prior to application to the one or more ~~wafers~~, wafers; and

a system controller configured to receive results of a qualification analysis of the plating solution and control a supply to the mixing point of the constituent chemicals, by interfacing with the plurality of tanks, based on the qualification analysis.

6. (Currently Amended) The system of claim 5, wherein the plurality of tanks comprise a tank to store a constituent chemical ~~a selected one of~~ from Co, Cu, Ni, Fe, Ag, Au, Pt, Pd and Ru.

7. (Currently Amended) The system of claim 5, wherein the plurality of tanks comprise a tank to store a constituent chemical ~~one of a selected one of~~ from a citric acid complex agent, ~~and an EDTA to be used as a complex agent, a selected one of a~~ NH₄Cl buffer, ~~and a boric acid to be used as a buffer, a selected one of a~~ KOH pH

~~adjuster, and a TMAH to be used at a pH adjuster, or a selected one of a DMAB reducing agent, a hypophosphite reducing agent, a formaldehyde reducing agent, and a glyoxylic acid to be used as a reducing agent.~~

8. (Currently Amended) The system of claim 5, wherein the in-line heaters are capable of in-line heating the ~~metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent~~ constituent chemicals to an application temperature in a range of 30°C - 90°C.

9-40. (Canceled)

41. (Currently Amended) The system of claim 5, wherein the plurality of tanks are configured to separately hold the ~~metal and the one or more of a complexing agent, a buffer, a pH adjuster and a reducing agent~~ constituent chemicals at room temperature.

42. (Currently Amended) The system of claim 5, wherein the system controller is configured to interface with ~~the plurality of tanks and the plurality of in-line heaters.~~